

### IN THE CLAIMS

Please amend the claims as follows.

For the Examiner's convenience, a list of all claims is included below.

1-11 (Cancelled)

12. (Currently Amended) A process comprising:

forming a metallization over a substrate;

forming a metal adhesion first layer above and on the metallization;

forming a metal second layer above and on the metal adhesion first layer

forming a metal third layer above and on the metal second layer;

forming a solder bump above and on the metal third layer, and

wherein ~~at least one of~~ the metal second layer comprises a copper and the metal third layer ~~comprises sputtered copper~~ is selected from a group consisting of a refractory metal, a metal-doped refractory metal, and a refractory metal alloy.

13. (Original) The process according to claim 12, forming a metal adhesion first layer further comprising:

sputtering a composition over the metallization under conditions to impart a compressive stress in the metal adhesion first layer, wherein the composition is selected from Ti, TiW, W and Cr.

14. (Currently Amended) A process comprising:

forming a metallization over a substrate;  
forming a metal adhesion first layer above and on the metallization;  
sputtering a copper metal second layer above and on the metal adhesion first  
layer under conditions to impart a compressive stress therein;  
forming a metal third layer above and on the copper metal second layer  
under conditions to impart a compressive stress therein, wherein the metal third  
layer is selected from a group consisting of a refractory metal, a metal-doped  
refractory metal, and a refractory metal alloy;  
forming a solder bump above and on the metal third layer The process to  
claim 12, ~~forming the metal second layer~~  
~~— sputtering a copper metal second layer over the metal adhesion first layer~~  
~~under conditions to impart a compressive stress therein; and forming the metal third~~  
~~layer further comprising: — sputtering the metal third layer under conditions to~~  
~~impart a compressive stress therein, wherein the metal third layer is selected from a~~  
~~refractory metal, a metal-doped refractory metal, or a refractory metal alloy.~~

15-16 (Cancelled)

17. (Original) The process according to claim 12, further comprising:  
forming an electrically conductive bump above and on the metal third layer.
18. (Currently Amended) A process comprising:  
forming a copper pad over a ~~metal sex (M6)~~ metallization substrate;

sputtering a Ti metal adhesion first layer above and on the ~~metallization~~  
copper pad;

sputtering a metal second layer above and on the Ti metal adhesion first  
layer;

forming a metal third layer above and on the metal second layer;

forming a solder bump above and on the metal third layer, and

wherein ~~at least one of~~ the metal second layer comprises copper and the  
metal third layer ~~comprises copper~~ is selected from a group consisting of a  
refractory metal, a metal-doped refractory metal, and a refractory metal alloy.

19. (Currently Amended) The process according to claim 18, wherein  
sputtering a Ti metal adhesion first layer above and on the ~~metallization~~ copper pad  
comprises:

sputtering a Ti composition over the metallization, wherein the Ti  
composition has a thickness in a range from about 500 Å to about 4,000 Å.

20. (Cancelled)

21. (Currently Amended) A process comprising:

forming a copper pad over a substrate;

sputtering a Ti metal adhesion first layer above and on the copper pad;

sputtering a metal second layer above and on the Ti metal adhesion first  
layer;

forming a metal third layer above and on the metal second layer;

forming a solder bump above and on the metal third layer.

~~The process according to claim 18,~~ wherein forming a the metal third layer  
comprises:

sputtering a NiV composition over the metal second layer, wherein the NiV  
composition has a thickness in a range from 1,000 Å to about 5,000 Å, and wherein  
the metal second layer has a thickness in a range from about 1,000 Å to about 5,000  
Å.

22-28 (Cancelled)